IN THE CLAIMS:

Claims 1, 12, 21, and 22 are amended herein. All pending claims and their present status are listed below.

1   1.   (currently amended) A probe apparatus for application monitoring, comprising:

2   (a)   a data collection module for collecting data from a network segment;

3   (b)   a flow processor coupled to the data collection module for classifying the

4   collected data into a plurality of flows;

5   (c)   a capture system coupled to the flow processor for filtering and buffering the

6   collected data based on the collected data and the flow corresponding to the collected

7   data, the capture system comprising a plurality of buffers allocated to the collected data,

8   the capture system reallocating buffers if a number of priority flows changes; and

9   (d)   a main processor for processing the filtered data based on the collected data and

10   the flow corresponding to the filtered data.

1   2.   (Original) The probe apparatus as recited in claim 1, wherein the data collection

2   module prepends the data with descriptor information, wherein the descriptor information

3   is used by the capture system to filter the collected data.

1   3.   (Original) The probe apparatus as recited in claim 1, wherein the capture system

2   includes a capture buffer and a focus buffer, wherein the capture system filters the

3   collected data stored in the capture buffer, wherein the filtered data is sent to the focus

4   buffer.

1   4.   (Original) The probe apparatus as recited in claim 3, wherein the capture system

2   captures the collected data in the capture buffer in at least one of a fill and stop mode, a

3   wrap mode, a priority queuing mode, and a non-priority queuing mode.

1   5.   (Original) The probe apparatus as recited in claim 4, wherein in priority queuing

2   mode the capture buffer is segmented into priority and non-priority queues, wherein the

3   buffer space for each queue varies dynamically based on the arrival of data that meets

4   priority criteria.

1   6.   (Original) The probe apparatus as recited in claim 5, wherein buffers are

2   reallocated to the priority queue from the non-priority queue as the number of priority

3   flows increases.

1   7.   (Original) The probe apparatus as recited in claim 5, wherein buffers are

2   reallocated to the non-priority queue from the priority queue as the number of priority

3   flows decreases.

1   8.   (Original) The probe apparatus as recited in claim 5, wherein the capture system

2   selectively discards flows from the priority queue based on predetermined criteria.

1   9.   (Original) The probe apparatus as recited in claim 1, wherein the main processor

2   identifies a flow as being important, wherein the flow processor uses the identification as

3   criteria for forwarding additional data from the identified flow to the main processor.

1   10.   (Original) The probe apparatus as recited in claim 1, wherein at least a portion of

2   the probe apparatus is implemented on a Field Programmable Gate Array (FPGA).

1   11.   (Original) The probe apparatus as recited in claim 10, wherein the portion of the

2   probe apparatus implemented on the FPGA includes dedicated FPGA engines for capture

3   and filtering of the data.

1   12.   (Currently amended) A method for application monitoring, comprising:

2   (a)   collecting data from a network segment;

3   (b)   classifying the collected data into a plurality of flows;

4   (c)   filtering and buffering the collected data based on the collected data and the flow

5   corresponding to the collected data, <u>the buffering being allocated to the collected data</u>;

6   ~~and~~

7   <u>(d)   reallocating buffering if a number of priority flows changes</u> and

8   <u>(e)</u>~~(d)~   processing the filtered data based on the collected data and the flow

9   corresponding to the collected data.

1   13.   (Original) The method as recited in claim 12, further comprising prepending the data

2   with descriptor information, wherein the descriptor information is used to filter the collected

3   data.

1   14.   (Original) The method as recited in claim 12, further comprising storing the collected

2   data in a capture buffer, filtering the collected data stored in the capture buffer, and sending

3   the filtered data to a focus buffer.

1   15.   (Original) The method as recited in claim 14, further comprising capturing the

2   collected data in the capture buffer in at least one of a fill and stop mode, a wrap mode, a

3   priority queuing mode, and a non-priority queuing mode.

1   16.   (Original) The method as recited in claim 15, further comprising segmenting the

2   capture buffer into priority and non-priority queues in priority queuing mode, wherein the

3   buffer space for each queue varies dynamically based on the arrival of data that meets

4   priority criteria.

1   17.   (Original) The method as recited in claim 16, further comprising reallocating buffers

2   to the priority queue from the non-priority queue as the number of priority flows increases.

1   18.   (Original) The method as recited in claim 16, further comprising reallocating buffers

2   to the non-priority queue from the priority queue as the number of priority flows decreases.

1   19.   (Original) The method as recited in claim 16, wherein the capture system selectively

2   discards flows from the priority queue based on predetermined criteria.

1   20.   (Original) The method as recited in claim 12, further comprising identifying a flow

2   of data as being important, and using the identification as criteria for forwarding additional

3   data from the identified flow for processing.

1   21.   (currently amended) A computer program product for application monitoring,

2   comprising:

3   (a)   computer code for collecting data from a network segment;

4   (b)   computer code for classifying the collected data into a plurality of flows;

5   (c)   computer code for filtering and buffering the collected data based on the collected

6   data and the flow corresponding to the collected data, the buffering being allocated to the

7   collected data; and

8   (d)   computer code for reallocating buffering if a number of priority flows changes and

9   (e)(d) computer code for processing the filtered data based on the collected data and the

10   flow corresponding to the collected data.

1   22.   (Currently amended) A probe apparatus for application monitoring, comprising:

2   (a)   a data collection module for collecting data from a network segment;

3   (b)   a flow processor coupled to the data collection module for classifying the collected

4   data into a plurality of flows;

5   (c)   a capture system coupled to the flow processor for filtering and buffering the

6   collected data based on the collected data and the flow corresponding to the collected data,

7   wherein the capture system includes a capture buffer and a focus buffer, wherein in priority

8   queuing mode the capture buffer is segmented into priority and non-priority queues, wherein

9   the buffer space for each queue varies dynamically based on the arrival of data that meets

10   priority criteria, wherein the buffer space is reallocated if a number of priority flows changes;

11   and

12   (d)   a main processor for processing the filtered data based on the collected data and the

13   flow corresponding to the collected data.

23.   (previously presented) A probe apparatus for application monitoring, comprising:

(a)   a data collection module for collecting data from a network segment;

(b)   a flow processor coupled to the data collection module for classifying the collected data into a plurality of flows;

(c)   a capture system coupled to the flow processor for filtering and buffering the collected data based on the collected data and the flow corresponding to the collected data; and

(d)   a main processor for processing the filtered data based on the collected data and the flow corresponding to the collected data;

(e)   wherein the data collection module prepends the data with descriptor information, wherein the descriptor information is used by the capture system to filter the collected data;

(f)   wherein the capture system includes a capture buffer and a focus buffer, wherein the capture system filters the collected data stored in the capture buffer, wherein the filtered data is sent to the focus buffer;

(g)   wherein the capture system captures the collected data in the capture buffer in at least one of a fill and stop mode, a wrap mode, a priority queuing mode, and a non-priority queuing mode;

(h)   wherein in priority queuing mode the capture buffer is segmented into priority and non-priority queues, wherein the buffer space for each queue varies dynamically based on the arrival of data that meets priority criteria;

(i)   wherein buffers are reallocated to the priority queue from the non-priority queue as the number of priority flows increases;

(j)   wherein buffers are reallocated to the non-priority queue from the priority queue as the number of priority flows decreases;

(k)   wherein the capture system selectively discards flows from the priority queue based on predetermined criteria including at least one of an amount of priority data exceeding a processing capability of the system, user specifications, and the flow matching a randomly selected identifier;

(1)   wherein the main processor identifies a flow as being important, wherein the flow processor uses the identification as criteria for forwarding additional data from the identified flow to the main processor;

(m)   wherein at least a portion of the probe apparatus is implemented on a Field Programmable Gate Array (FPGA);

(n)   wherein the portion of the probe apparatus implemented on the FPGA includes dedicated FPGA engines for capture and filtering of the data.